

Claims

We claim:

- 1 1. A data processing apparatus, comprising:
2 a subject;
3 an observer associated with the subject and adapted to generate configuration
4 information; and
5 a transmission manager associated with the subject, the transmission manager adapted
6 to receive the configuration information from the observer and to selectively
7 communicate update information to the observer based on the configuration
8 information.
- 2 2. The apparatus of claim 1, wherein the configuration information includes a desired
type indication.
- 3 3. The apparatus of claim 2, wherein the transmission manager selectively discards the
4 update information in response to the desired type indication.
- 5 4. The apparatus of claim 1, wherein configuration information includes a communication
6 speed indication.
- 7 5. The apparatus of claim 4, wherein the transmission manager accumulates the update
8 information in response to the communication speed indication.
- 1 6. The apparatus of claim 1, wherein the transmission manager is an aspect associated
2 with the subject.
- 1 7. The apparatus of claim 1, wherein the subject generates the state change indication and
2 communicates the state change incitation to the transmission manager.

1 8. The apparatus of claim 1, wherein the transmission manager selectively modifies the
2 update information in response to the on the configuration information.

1 9. The apparatus of claim 1, further comprising:
2 a first processor;
3 a first memory coupled to the first processor, wherein the subject and the transmission
4 manager reside within the first memory;
5 a second processor; and
6 a second memory coupled to the second processor, wherein the observer resides within
7 the second memory.

1 10. A distributed computer system, comprising:
2 a) a subject resident on a first computer node, the subject code segment adapted to
3 produce an update message;
4 b) an observer resident on a second computer node, the first computer node being in
5 operable communication with the second computer node; and
6 c) an aspect coupled between the subject code segment and the observer, the aspect
7 configured to detect information associated with the update message and to selectively
8 communicate an update from the subject to the observer based upon the detected
9 information.

1 11. The distributed computer system of claim 10, wherein the subject comprises a network
2 management software program, and wherein the observer code segment comprises a graphical
3 user interface.

1 12. The distributed computer system of claim 10, wherein the subject, the observer, and
2 the aspect comprise objects.

13. A method of communicating updates from a subject to an observer, comprising:
communicating configuration information from the observer to an aspect;
notifying the aspect of an update;
interrogating the update to generate to generate update information; and
selectively communicating the update to the observer based on a comparison between
the update information and the configuration information.

14. The method of claim 13, further comprising selectively modifying the update based on
a comparison between the update information and the configuration information.

15. The method of claim 13, further comprising accumulating the update information
based on a comparison between the update information and the configuration information.

16. The method of claim 13, further comprising sending updated configuration information
from the observer to the aspect.

17. The method of claim 16, wherein the updated configuration information includes a
system load indication.

18. The method of claim 13, further comprising associating the aspect with the subject.

19. A computer program product, comprising:
(a) a program configured to perform a method of controlling updates between a
subject and an observer, the method comprising:
1) communicating configuration information from the observer to an aspect;
2) notifying the aspect of an update;
3) interrogating the update to generate to generate update information; and
4) selectively communicating the update to the observer based on a comparison
between the update information and the configuration information.
(b) a signal bearing media bearing the program.

20. The computer program product of claim 19, wherein the method further comprises selectively modifying the update based on a comparison between the update information and the configuration information.

21. The computer program product of claim 19, wherein the method further comprises accumulating the update information based on a comparison between the update information and the configuration information.

22. The computer program product of claim 19, wherein the method further comprises sending updated configuration information from the observer to the aspect.

23. A method of maintaining data consistency between a subject object on a first computer system and an observer object on a second computer system, comprising:

- a) generating an aspect object;
- b) communicating configuration information from the observer object to the aspect object, the configuration information including a desired type indicator and an desired communication rate indicator;
- c) attaching the aspect object to the subject object; and
- d) in response to a state change indication from the subject:
 - 1) sending an update to the aspect;
 - 2) interrogating the update to generate an update type indicator;
 - 3) modifying the update based on a comparison between the update type indicator and the desired type indicator to produce a modified update;
 - 4) sending the modified update to an accumulator;
 - 5) using the desired communication rate indicator to determine whether the object is ready to receive the modified update; and
 - 6) communicating the modified update to the observer.